

# TABLE OF CONTENTS.

The following synoptic table shows the first page of each of the principal sections in the respective numbers of the MONTHLY WEATHER REVIEW for 1917:

Title of section.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
I. Aerology.....	2	48	92	150	204	268	336	398	440	482	530	574
II. General meteorology.....	6	57	94	156	209	271	338	402	444	487	534	578
III. Forecasts and warnings.....	20	68	119	173	241	303	370	415	457	502	544	607
IV. Rivers and floods.....	25	72	124	176	245	306	371	418	462	509	551	614
Lake levels.....	25	72	129	181	246	307	372	418	462	.....	551	614
V. Seismology.....	26	73	130	182	247	308	373	419	463	512	551	615
Seismological dispatches.....	32	77	134	186	253	317	380	425	467	515	556	621
VI. Bibliography.....	33	78	135	189	254	319	381	426	468	516	559	623
VII. Weather and data for the month.....	34	80	136	191	256	321	383	428	470	518	561	625
1916-weather conditions over the North Atlantic.....	35	81	138	193	258	323	384	429	471	519	562	626
Condensed climatological summary.....	39	84	142	195	260	326	387	431	473	522	565	630
Description of tables and charts.....	40	.....	.....	.....	.....	.....	388	.....	.....	.....	.....	.....
Climatological data for United States Weather Bureau stations (Table I).....	41	85	143	196	261	327	389	432	474	523	566	631
Accumulated amounts of precipitation (Table II).....	44	88	146	199	264	330	392	435	477	526	569	634
Data furnished by the Canadian Meteorological Service (Table III).....	46	90	148	201	266	333	395	438	479	528	571	636

The following charts appear in each number of the REVIEW from January to December, inclusive, except as noted after Charts VIII, X, and XI:

- Chart I. Hydrographs for several principal rivers of the United States.
- II. Tracks of centers of high areas.
- III. Tracks of centers of low areas.
- IV. Departures of mean temperatures.
- V. Total precipitation for the month.
- VI. Percentage of clear sky.
- VII. Sealevel isobars and isotherms, and prevailing winds.
- VIII. Total snowfall (January to May, November and December).
- IX. Means of meteorological data for the North Atlantic Ocean, 1916.
- X. Hurricanes of the current year (December).
- XI. Earthquake frequency of the current year (December).

The following charts appear only for the months given in parenthesis:

- XLV—28 to 32, A. J. H.—Seasonal and annual occurrence of hail (March).
- XLV—59 to 67, H. C. F.—Weather maps illustrating tornadoes, May 20–June 6, 1917 (June).
- XLV—76.—Average annual precipitation over the United States (July).
- XLV—85 to 86, A. J. M.—Cold waves in Florida (August).

#### SUPPLEMENTS TO THE MONTHLY WEATHER REVIEW.

During the summer of 1913 the system of issue of publications of the Department of Agriculture was changed and simplified so as to eliminate numerous independent series of bureau bulletins. In accordance with this plan, among other changes, the series of quarto bulletins—lettered from A to Z—and the octavo bulletins—numbered from 1 to 44—formerly issued by the U. S. Weather Bureau have come to their close.

Contributions to meteorology such as would have formed bulletins, are authorized to appear hereafter as Supplements to the MONTHLY WEATHER REVIEW. (Memorandum from the Office of the Assistant Secretary, May 18, 1914.)

These supplements comprise those more voluminous studies which appear to form permanent contributions to the science of meteorology and of weather forecasting, as well as important communications relating to the other activities of the U. S. Weather Bureau. They appear at irregular intervals as occasion may demand, and contain approximately 100 pages of text, charts, and other illustrations. Subscribers to the MONTHLY WEATHER REVIEW receive the SUPPLEMENTS without extra charge. Copies may be procured at the prices indicated below by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C.

#### SUPPLEMENTS PUBLISHED.

##### 1914.

No. 1. Types of storms of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1914. 37 p. 114 ch. 4°. Price, 25 cents. (W. B. 538.)

##### 1915.

No. 2. I. Calendar of the leafing, etc., of the common trees of the eastern United States. By G. N. Lamb. 19 p. 4 figs. II. Phenological dates, etc., recorded by T. Mikesell at Wauseon, Ohio. By J. Warren Smith. 73 p. 2 figs. Washington, 1915. 4°. Price, 25 cents. (W. B. 558.)

##### 1916.

No. 3. (*Aerology No. 1.*) Sounding-balloon ascensions at Fort Omaha, Nebr.: May 8, 1915, etc. By W. R. Blair and others. 67 p. 23 figs. Washington, 1916. 4°. Price, 25 cents. (W. B. 592.)

##### 1917.

No. 4. Types of anticyclones of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1917. 25 p. 7 figs. 73 ch. 4°. Price, 25 cents. (W. B. 600.)

No. 5. (*Aerology No. 2.*) Free-air data at Drexel Aerological Station: January, February, and March, 1916. By W. R. Blair and others. Washington, 1917. 59 p. 6 figs. 4°. Price, 25 cents. (W. B. 603.)

No. 6. Relative humidities and vapor pressures over the United States, including a discussion of data from recording hair hygrometers for a period of about 5 years. By P. C. Day. Washington, 1917. 61 p. 7 figs. 34 charts. 4°. Price, 25 cents. (W. B. 609.)

No. 7. (*Aerology No. 3.*) Free-air data at Drexel Aerological Station: April, May, and June, 1916. By W. R. Blair and others. Washington, 1917. 51 p. 4 figs. 4°. Price, 25 cents. (W. B. 619.)

Title-page and Contents for binding Nos. 1-6. Washington, 1917. 4 p. 4°. Free.

##### *In press.*

No. 8. (*Aerology No. 4.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1916. By W. R. Gregg and others. — p. 12 figs. 4°. Price, — cents. (W. B. —.)

No. 9. Periodical events and natural law as guides to agricultural research and practice. By A. D. Hopkins. — p. 24 figs. 4°. Price, — cents. (W. B. —.)

##### *In preparation.*

No. 10. (*Aerology No. 5.*) Free-air data at Drexel Aerological Station: January to June, inclusive, 1917. By W. R. Gregg and others.

# CORRECTIONS AND ADDITIONS.

1914.

## In the REVIEW for April:

Page 231, column 1, line 24, for  $\frac{1000}{\rho g}$  read  $\frac{1\ 000\ 000}{\rho g}$ .

1916.

## In the REVIEW for November:

Page 615 column 2, line 7, the equation should read:  $\cos h = \frac{\sin a - \sin \phi \sin \delta}{\cos \phi \cos \delta}$ .

1917.

## In the REVIEW for January:

Page 15, column 2, footnote 42, next to last line, for "prestened" read "presented".

## In the REVIEW for February:

Page 81, column 2, opposite Missouri Valley, fourth column, for 2.68 read 0.27.

## In the REVIEW for March:

Page 100, column 1, next to last line, first word should be "Summer."

Page 135, column 2, Twelfth entry, for "Merrill, Geo. P." read "McAdie, Alex. G."

Twenty-second entry, for "fulmizaioni" read "fulminazioni".

## In the REVIEW for April:

Page 151, column 2, equation (2), for  $b^2 = c^2 + b^2$  read  $b^2 = c^2 + b'^2$ .

Page 155, figure 4, for "scale in figure 4" read "scale in figure 3".

Page 156, column 2, line 28, for "there were more NE winds" read "there was more NE wind".

Page 157, column 1, line 6 from bottom, for "offshore" read "onshore".

Page 168, figure 1. The scale of miles should be divided by 10, to read: 4, 2, 0, and 4 miles, respectively.

## In the REVIEW for May:

Page 217, column 2, line 33, for "July 31, 1913" read "July 30, 1913".

## In the REVIEW for June:

Page 272, column 1, supply the following list of precipitation rates at New Haven, if missing:

	Inch.
Mar. 11, 10 p. m. to 12th, 7 a. m.....	0.10
Mar. 12, 7 a. m. to 12th, 3 p. m.....	0.14
Mar. 12, 3 p. m. to 12th, 10 p. m.....	0.11
Mar. 12, 10 p. m. to 13th, 7 a. m.....	0.07

Page 331, Table II, Milwaukee, Wis., "Excessive rates ended":

For 1.25	read 1:25
12.47	12:47
1.37	1:37
2.47	2:47

## In the REVIEW for July:

Page 347, column 1, Table 1: Southampton, L. I., should be described as 14 miles from Long Island Sound.

## In the REVIEW for October:

Page 487, column 2, next to last line, for "later than" read "earlier than."

Page 489, column 1, first line, for "later than" read "earlier than."

## In the REVIEW for November:

Page 535, column 2, in the first equation, for (2213.65) read (2213.65)½.

Page 554, column 2, for "Panama Canal Zone" read "Panama Canal"; for "Isthmian Canal Commission" read "Governor, Panama Canal."

## In the REVIEW for December:

Page 603, column 1, forty-third line from top, for "Bilwiller" read "Billwiller".

## Supplement No. 5.

Page 3, Table 1: Make departures plus from 3,000 to 4,500 meters in January; from 1,250 to 4,250 meters in February; and from 1,250 to 3,250 and at 4,000 meters in March.

Page 14: Time for January 17, 1916 (No. 3), should be p. m. instead of a. m.

Page 15: In record of January 18, 1916, series (No. 6), the wind velocity at 750 meters in the ascent should be 15.3 instead of 51.3 meters per second.

Page 18: Time for January 21, 1916 (No. 2), should be p. m. instead of a. m.

Page 36: Time for February 21, 1916 (No. 3), should be p. m. instead of a. m.

Page 40: Time for March 1, 1916 (No. 1), should be p. m. instead of a. m.





# SUBJECT AND AUTHOR INDEX OF THE MONTHLY WEATHER REVIEW.

1917. VOL. 45.

- Abbe, Cleveland, jr.  
Aurora of August 25, 1917, at Washington, D. C. 399.  
Bathyrheometer as anemometer (Y. Delage). *Review*, 602.  
Forests-and-rainfall experiments. 453.  
Glaze; "glazed roads"; "ammil." 500.  
Modern Chinese meteorological monthly. 113.  
Recent distinctions in meteorology. 606.  
Rollin Arthur Harris, Ph. D., 1863-1918. 605.  
William Bullock Clark, 1869-1917. 1 p., 367.  
Windward Islands versus Leeward Islands (map). 455.
- Abbe, Cleveland, jr., translator.  
Classification of the hydrometeors (G. Hellmann)—*Concl.*, 4 p., 13.
- Abbe Meteorological Observatory.  
Location of, in Cincinnati, Ohio, (W. C. Devereaux) (map), 115.  
Records at, compared with those at the Government Building, Cincinnati, [1915-17] (W. C. Devereaux) (8 figs.), 9 p., 224.
- Abercromby, Ralph.  
Comments on his paper on cyclones (Maxwell Hall). 578.
- Abnormalities.  
Cold spring of 1917, (P. C. Day) (4 figs.), 4 p., 285.  
Some aspects of the cold period, December, 1916, to April, 1917, (R. C. Mossman), 289.  
Winter of 1917-18: December, 1917, in Forecasts and warnings, December, 1917, (A. J. Henry), 4 p., 607.
- Aerology.  
Free-air data in the Hawaiian Islands, July, 1915, (W. E. Ellis), 3 p., 52.
- Aeronautical observations.  
Meteorological observations by an aeronaut (Lieut. [C. K. M.] Douglas), 93.
- Aeronautics.  
Ground schools in military aeronautics established, 298.  
Meteorological courses for aeronautical engineers (C. F. Marvin), with Syllabus of lectures by R. DeC. Ward, 298.  
Meteorology and aviation, (W. H. Dines), 401.  
Meteorology and war flying (R. DeC. Ward), 10 p., 591.  
Weather Bureau exhibit at the first Pan-American Aeronautic Exposition (W. R. Gregg) (6 figs.), 1 p., 55.  
World's air routes and their regulation (Lord Montagu), 270.
- Aeroplane.  
Meteorological observations from, (Lieut. [C. K. M.] Douglas), 93.
- Africa.  
Desiccation of, (R. L. Harger), 301.
- Agricultural meteorology.  
Relation between temperature and crops (D. A. Seeley) (3 figs.), 6 p., 354.
- Air, impurities of.  
Ammonia in dew (J. W. Tayleur), 19.
- Airplane. *See* Aeroplane.
- Aitken, J.  
Awarded Royal Medal of the Royal Society, London, [November 30, 1917], 606.  
Some nuclei of cloudy condensation,—III. *Abstract*, 452, 531.
- Åkerblom, F.  
Relation between pressure-gradient, wind, and friction in steady motion. *Abstract*, 455.
- Alciatore, Henry F.  
Growth, settling and final disappearance of a snow cover in the Sierra Nevada (fig.). 2 p., 109.
- Alexandria Bay, N. Y.  
Aurora of August 21, 1917, observed at, (D. F. Manning), 399.  
Earth tremor due to thunder notes observed at, (D. F. Manning), 515.
- Alps.  
Aqueous exchange between the névé and the atmosphere (R. Billwiller), *Abstract*, 601.  
Variations of alpine glaciers (P. L. Mercanton), *Abstract*, 601.  
"Ammil" (Devonshire).  
Described and defined, 500.
- Anderson, V. G. *See* Masson, Orme.
- André, L.  
Computation and measurement of the complex molecules of some vapors, according to the new condensation theory. *Abstract*, 452.
- Anemometers.  
Bathyrheometer as an anemometer (Y. Delage), *Review*, 602.
- Anemometer exposure.  
Anemometer records on a Buffalo office building compared with those secured near the surface of Lake Erie (B. C. Kadel) (1 fig.), 3 p., 156.
- Angot, [Charles] Alfred.  
Awarded Symons Memorial Gold Medal, January 17, 1916 [biog. sketch], *Reprinted*, 606.  
Rainfall and gunfire. *Abstract*, 1 p., 450.
- Anticyclones.  
Formation of anticyclonic stratus (C. K. M. Douglas), *Abstract*, 455.  
Revolving fluid in the atmosphere (N. Shaw), *Abstract*, 454.
- Antler, N. Dak.  
Photographs of the tornado of August 20, 1911, at, (H. E. Simpson) (5 figs.), 1 p., 237.
- April.  
Mean snowfall (1896-1916) of, in New England (C. F. Brooks) (map), 282.
- Arctowski, H[enryk].  
Normal anomalies of mean annual temperature variations. *Abstract*, 412.  
Sunspots, magnetic storms, and rainfall (fig.). 1 p., 538.
- Areometer. *See also* Densimeter.
- Argentina.  
Atmospheric circulation and the weather in, (H. H. Clayton), *Abstract*, 60.
- Atlas of American Agriculture.  
"Advance sheet No. 1: Precipitation," how prepared (W. G. Reed & J. B. Kincer), 3 p., 233.  
"Advance sheet No. 1: Precipitation," noticed and reproduced (R. DeC. Ward) (Chart xlv-76), 339.
- Audibility.  
Acoustic efficiency of fog-signal machinery (L. V. King), *Abstract*, 442.  
Distance at which thunder can be heard (C. E. Miller), 366.  
Doppler's principle for a windy atmosphere (H. Bateman), 441.  
Propagation, to great distances, of the sound of cannonade at the front (G. Bigourdan), *Abstract*, 442.  
Sound areas of the explosion at East London, January 19, 1917 (C. Davison), 55.
- Auroras.  
Device for observing radiants of, (Great Britain Meteorological Office), 486.  
Magnetic storm [accompanying the aurora] of August 26-27, 1916 (W. E. W. Jackson), *Abstract*, 400.  
August 21, 1917, observed at Alexandria Bay, N. Y. (D. F. Manning), 399.  
August 25, 1917, observed at Washington, D. C., (C. Abbe, jr., I. F. Hand), 399.  
August 26, 1916, observed at Hessel, Mich., (F. E. Nipher), 5.
- Australia.  
Influence of weather conditions on the amounts of nitrogen acids in the rainfall and atmosphere in Australia (O. Masson), 501.  
Settlement of tropical Australia (G. Taylor) (fig.), 2 p., 589.
- Avalanches.  
Avalanche wind at Juneau, Alaska, January 26, 1917 (M. B. Summers), 114.  
"Average interval" curve. *See also* "Probability curve."
- Aviation. *See also* Aeronautics.  
Meteorology and war-flying (R. DeC. Ward), 10 p., 591.
- Baker, Frederick S.  
Some field experiments on evaporation from snow surfaces (2 figs.), 3 p., 363.
- Ballistics.  
Aerological observations for, in Hawaii (W. E. Ellis), 3 p., 52.
- Ballinger, Tex.  
Unusual hailstorm at (E. M. Eubank), 118.
- Balloon observations.  
Of the neutral points of atmospheric polarization from great heights (A. Wigand), *Abstract*, 531.
- Baltic Sea.  
Distance at which thunder can be heard (R. Henning cited on), 367.

- Baltimore, Md.  
Hail squall of May 1, 1917, and accompanying weather at (L. K. Hirschberg), 236.
- Barron, William E.  
Solar halo at Vicksburg, Miss., April 24, 1917. 207.
- Bateman, Harry.  
Doppler's principle for a windy atmosphere. 441.
- Bathyrheometer.  
Applied as an anemometer (Y. Delage), *Review*, 602.
- Becker, L.  
Arithmetic mean and the "middle" value of certain meteorological observations. *Abstract*, 543.
- Belgium.  
Notes on the climate of France and, (P. C. Day) (7 fig.), 10 p., 487.
- Bennett, Walter J.  
Cold waves and freezing temperatures at Tampa, Fla. 123.  
Tornado of April 5, 1917, at Tampa, Fla., (fig.). 2 p., 167.
- Berkeley, Cal.  
Local wind of the foehn type near San Francisco Bay (B. M. Varney) (fig.), 1 p., 539.  
Meteorological summary for the 28 years, July 1, 1887-June 30, 1915, (W. G. Reed), 67.  
Report of the meteorological station at, for the year ending June 30, 1915 (W. G. Reed) (3 figs.), 6 p., *Author's abstract*, 61.
- Bigourdan, G.  
Propagation, to great distances, of the sound of cannonade at the front. *Abstract*, 442.
- Bilham, E. G.  
Use of monthly mean values in climatological analysis. *Abstract*, 602.
- Billwiller, R.  
Aqueous exchange between the neve and the atmosphere. *Abstract*, 601.
- Birds.  
Bird migration in central Switzerland in relation to meteorological conditions (K. Bretscher), 1p., *Abstract*, 451.
- Birkeland, Kristian, 1867-1917.**  
Obituary of, by C. Chree, 300.
- Bishop's Ring.  
Observations on, 1912-1916, in Switzerland (C. Dorno), 483.  
Solar coronæ: 5 years' recent observations (J. Maurer), *Abstract*, 577.
- Blair, Thomas Arthur.  
Some temperature correlations in the United States (8 figs.). 6 p., 444.
- Blair, William R[ichards].  
Alternate deposition of rauhreif and rauheis (fig.). 19.  
Comments on formation of winter stratus; and depth of northeast wind. 60.
- Bloesville, Pa.  
Distance at which thunder can be heard (C. E. Miller), 366.
- Bolton, S.  
Surface currents of Jupiter [1916-17]. *Abstract*, 443.
- Bordeaux-Floriac.  
Lunar total eclipse at, 1917, July 4 (L. Picard), *Abstract*, 575.
- Borkum, Germany.  
Precipitation at, 1875-1885 (H. Meyer), 167.
- Bowie, Edward Hall.  
Storms and warnings (monthly reports), 20, 68, 173, 303.
- Brester, A.  
Theory of the sun. *Review*, 485.
- Breton, H. H.  
Quoted on the term "ammil" (Devonshire), 500.
- Bretscher, K.  
Bird migration in central Switzerland in relation to meteorological conditions. 1p., *Abstract*, 451.
- Bridgehampton, N. Y.  
Daily temperature at, and sea-breeze (E. S. Clowes) (2 figs.), 345.
- British Isles.  
Heaviest rainfall in, 501.
- Brooks, Charles F[ranklin].  
New England snowfall (30 figs.). 15 p., 271.  
Scarf clouds (3 figs.). 2 p., 361.
- Bruton, Somerset, Great Britain.  
Heaviest rainfall in the British Isles occurred at, 500.
- Buffalo, N. Y.  
Anemometer records on a Buffalo office building compared with those secured near the surface of Lake Erie (B. C. Kadel) (fig.), 3 p., 156.  
Report of severe cyclone at, December 6-10, 1917 (D. Cuthbertson), 609.
- Bumping Lake, Wash.  
Snow cover at, 1914, 1915, 1916 (H. F. Alciatore), 111.
- Bush, C[arl] L[eroy]. Co-author. See Flora & Bush.
- California.  
Fog along the California coast (A. H. Palmer) (fig.), 3 p., 496.  
Lightning and forest fires in (A. H. Palmer) (5 figs.), 4 p., 99.  
Notes on the hot wave in southern California, June 14-17, 1917 (F. A. Carpenter) (5 figs.), 3 p., 408.  
Trinity County. Great thunderstorm of August 1, 1917, in (J. Jones), 500.
- Calvert, Edgar B[assett].  
Weather Bureau and the war. *Abstract*, 411.
- Canada.  
Canadian astronomical appointments [1916-17], 456.
- Canal Zone.  
See Panama Canal.
- Carpenter, Ford Ashman.  
Notes on the hot wave in southern California, June 14-17, 1917 (5 figs.). 3 p., 408.
- Castlewood, Ky.  
Barogram during New Albany, Ind., tornado of March 23, 1917 (F. J. Walz), 171.
- Centers of action.  
Some researches in the Far Eastern seasonal correlations: Second note (T. Okada) (2 figs.), 2 p., 238.  
Same. Third note (T. Okada), 1 p., *Abstract*, 299.  
Same. Fourth note (T. Okada) (fig.), 4 p., 535.
- Central States.  
Tornadoes and windstorms of May 25-June 6, 1917, in (H. C. Frankenfield) (2 photos., map, charts). 7 p., 291.
- China, Department of Education.  
Journal of meteorology published by Central Observatory of, at Peking (C. Abbe, jr.), 113.
- Chree, C.  
**Kristian Birkeland, 1867-1917.** Reprinted, 300.
- Cincinnati, Ohio.  
Records at the Abbe Meteorological Observatory compared with those at the Government Building, Cincinnati [1915-1917] (W. C. Devereaux) (8 figs.), 9 p., 224.  
Tornado at, March 11, 1917 (W. C. Devereaux) (2 figs.), 2 p., 114.
- Cincinnati Observatory (1869-1873).  
Location of (map), 225.
- Circulation.  
Atmospheric, and the weather in Argentina (H. H. Clayton), *Abstract*, 60.
- Circumhorizontal arc.  
Observed at Vicksburg, Miss., April 24, 1917 (W. E. Barron), 207.
- Clark, William Bullock, 1860-1917.**  
Obituary of (W. J. Humphreys), 367.  
Obituary of (C. Abbe, jr.), 367.
- Clayton, H[enry] Helm.  
Atmospheric circulation and the weather in Argentina. *Abstract*, 60.
- Climate.  
Settlement of tropical Australia (G. Taylor) (fig.), 2 p., 589.
- Climatological methods.  
Use of monthly mean values in climatological analysis (E. G. Bilham), *Abstract*, 602.
- Climographs.  
Referred to (G. Taylor), 590.
- Clouds.  
Ascending current in a cumulus, determined (C. F. Brooks), 363.  
Formation of anticyclonic stratus (C. K. M. Douglas), *Abstract*, 455.  
Formation of winterstratus; depth of northeast wind (D. Manning), 60.  
Scarf clouds (C. F. Brooks) (3 figs.), 2 p., 361.  
Super-cirri, nature of (C. Dorno), 484.
- Clowes, Ernest S.  
Influence of the sea on the climate of Long Island, N. Y., 1 p., 347.  
Seabreeze on eastern Long Island (2 figs.), 2 p., 345.
- Cold waves.  
Cold waves and freezing temperatures at Tampa, Fla. (W. J. Bennett), 123.  
Fish killed by the cold wave of February 2-4, 1917, in Florida (R. H. Finch), 171.  
Quintette of cold waves in Florida (A. J. Mitchell) (fig., Charts XLV-85-86), 2 p., 416.
- Colombia.  
National meteorological service of, established December 16, 1916, 1 p., 11.

- Columbia River.  
Annual rise in, 1917 (E. M. Keyser) (fig.), 1 p., 509.
- Condensation.  
Aqueous exchange between the névé and the atmosphere (R. Billwiller), *Abstract*, 601.  
Computation and measurement of the complex molecules of some vapors, according to the new condensation theory (L. André), *Abstract*, 452.  
Condensation and evaporation for gas molecules (I. Langmuir), *Abstract*, 452.  
Factors influencing the condensation of aqueous vapor in the atmosphere (A. Massini), *Abstract*, 412.  
Some nuclei of cloudy condensation—III. (J. Aitken), *Abstract*, 452, 531.
- Coronas.  
Lunar total eclipse of December 27-28, 1917, at Honolulu (C. A. Reichelt), 575.  
Solar coronæ: Five years' recent observations (J. Maurer), *Abstract*, 577.  
"Telluric solar corona" of Maurer defined (C. Dorno), 484.
- Correlation.  
Isocorrelational charts of the United States for January and annual temperatures (San Diego=1.0) (T. A. Blair) (2 figs.), 446.  
Some researches in the Far Eastern seasonal correlations: Second note. (T. Okada) (2 figs.), 2 p., 238.  
Same. Third note (T. Okada), 1 p., *Abstract*, 299.  
Same. Fourth note (T. Okada) (fig.), 4 p., 535.  
Some temperature correlations in the United States (T. A. Blair) (8 figs.), 6 p., 444.
- Cotton.  
Relation of weather to the amount of cotton ginned during certain periods (J. B. Kincer) (2 figs.), 5 p., 6.
- Crops.  
Relation between temperature and crops (D. A. Seeley) (3 figs.), 6 p., 354.
- Current meter.  
Pettersson photographically recording, described (fig.), 163.
- Cuthbertson, David.  
Severe storm at Buffalo, December 6-10, 1917. 609.
- Cyclones.  
Revolving fluid in the atmosphere (N. Shaw), *Abstract*, 454.  
Severe cyclone of December 6-10, 1917, Buffalo, N. Y. (report on, by D. Cuthbertson), 609.
- Darkness.  
Another "Dark day of May, 19, 1780" (M. Hall quoted on), 12.  
Dark day in Jamaica (M. Hall), 366.
- Davis, Walter G.  
Servicio meteorológica argentina: Historia y organización, con un resumen de los resultados. 1 p., *Abstract*, 60.
- Davison, Charles.  
Sound areas of the explosion at East London, January 19, 1917. *Reprinted*, 55.
- Day, Preston Clairsville.  
Cold Spring of 1917 (4 figs.), 4 p., 285.  
Notes on the climate of France and Belgium (7 figs.), 10 p., 487.  
Weather of the month 1917 [monthly]: 34, 80, 136, 191, 256, 321, 383, 428, 470, 518, 561, 625.
- December.  
Mean snowfall (1895-1915) of, in New England (C. F. Brooks) (map), 277.
- Defant, A.  
Daily nonperiodic pressure changes in the United States. *Cited*, 290.
- Delage, Y[ves].  
The bathyrheometer as anemometer. *Reviewed*, 602.
- Densimeter. *See also* Areometer.  
Pettersson areometers described (fig.), 162, 236.  
Pettersson hydrostatic densimeters, described (fig.), 160.  
Pettersson precision areometer, gimbal suspension, described (fig.), 236.  
Pettersson recording densimeters, described (fig.), 160.  
Pettersson water-bottle densimeters (fig.), 162.
- De Quervain, A.  
Meteorology of Greenland's inland ice and its foehn. *Abstract*, 601.
- Desiccation.  
Desiccation of Africa (R. L. Harger), 301.
- Devereaux, William Charles.  
Records at the Abbe Meteorological Observatory compared with those at the Government Building, Cincinnati (1915-1917) (8 figs.), 9 p., 224.  
Tornado at Cincinnati, Ohio, March 11, 1917 (2 figs.), 2 p., 115.
- Dew.  
Ammonia in (J. W. Tayleur), 19.  
Frozen dew in Chile called "Helada", 500.
- Diaphone (of J. P. Northey).  
Described, 442.
- Dines, William Henry.  
Awarded Symons Memorial Medal, 1914, by Royal Meteorological Society, London, 606.  
Meteorology and aviation. *Reprinted*, 401.
- Divining rod.  
Use of, in the search for hidden things (O. E. Meinzer quoted on), 300.
- Doppler's principle.  
*See* Audibility.
- Donnel, Charles A.  
Formula by, for predicting minimum temperatures, discussed, 407.  
Hurricanes of 1917 (with chart xlv-121). 612.
- Dorno, C.  
Atmospheric optical disturbances, Fall of 1911 to February, 1917. 1 p., *Translation*, 483.
- Douglas, C. K. M.  
Formation of anticyclonic stratus. *Abstract*, 455.  
Meteorological observations by an aeronaut. *Quoted*, 93.
- Dow, J. S.  
Relation between sunlight and moonlight, *Abstract*, 532.
- Duboc, ———.  
*Quoted and cited on* "northers" in the Canal Zone prior to July, 1881, 546.
- Dufour, Charles & Forel, F.-A.  
Studies in condensation on snow and ice criticized (Billwiller), *Abstract*, 601.
- Dyke, Ray A.  
Tropical hurricane of September 27-28, 1917, in southeastern Louisiana (2 figs.), 2 p., 506.
- Dynamics.  
Dynamics of revolving fluids (Rayleigh), *Abstract*, 1 p., 413.
- Earth: Penetrating radiation.  
Penetrating radiation in the atmosphere (G. C. Simpson), *Abstract*, 401.
- Earthquakes.  
Earthquakes felt in United States during 1917 (W. J. Humphreys) (Chart xlv-122), 1 p., 621.  
Memorandum on the Missouri earthquake of April 9, 1917 (S. Paige), 318.  
Minnesota's earthquake of September 3, 1917 (C. J. Posey) (fig.), 2 p., 556.  
Missouri earthquake of April 9, 1917 (R. H. Finch) (fig.), 2 p., 187.
- East Lansing, Mich.  
Relation between temperature and crops at (D. A. Seeley) (3 figs.), 6 p., 354.
- East London, England.  
Sound areas of the explosion at, January 19, 1917 (C. Davison), 55.
- Eclipses.  
Lunar total eclipse, 1917, July 4 (L. Picard), *Abstract*, 575.  
Lunar total eclipse of 1917, December 27-28, at Honolulu (C. A. Reichelt), 575.
- Eclipse meteorology.  
Observations of atmospheric electricity during the total solar eclipse on October 10, 1912, at Boa Vista, Brazil (W. Knoche & J. Laub), *Abstract*, 443.
- Ekholm, Nils.  
Reduction of air temperatures at Swedish stations to a true mean. 1 p., *Abstract*, 58.
- Electricity, atmospheric.  
Observations of, during the total solar eclipse on October 10, 1912, at Boa Vista, Brazil (W. Knoche & J. Laub), *Abstract*, 443.  
Peculiar streak in line with kite wire (B. J. Sherry); remarks by W. R. Blair, 269.
- Ellerman, F. *See* Hale & Ellerman.
- Ellis, Arthur J.  
Divining rod, a history of water witching, with a bibliography [Introduction by O. E. Meinzer], *Noticed*, 300.
- Ellis, Wilmot E.  
Free-air data in the Hawaiian Islands, July, 1915. 3 p., 52.
- Emery, Samuel C.  
High water in Memphis district, 1917. *Quoted*, 245.
- England.  
Winter, 1916-17, at Greenwich, 118.
- Erosion.  
Competency of wind in land depletion (C. R. Keyes), 2 p., 57.



- Eubank, E. M.  
Notes on unusual hailstorm at Ballinger, Tex. 118.
- Evaporation.  
Aqueous exchange between the névé and the atmosphere (R. Billwiller), *Abstract*, 601.  
Condensation and evaporation of gas molecules (I. Langmuir), *Abstract*, 452.  
Evaporation and adsorption (Schidlof), *Abstract*, 413.  
Evaporation of mercury droplets suspended in a gas (Schidlof & Karpowicz), *Abstract*, 413.  
New evaporation formula (R. E. Horton), *Abstract*, 453.  
Some field experiments on evaporation from snow surfaces (F. S. Baker) (2 figs.), 3 p., 363.
- Fargo, N. Dak.  
Parhelic circle with two pairs of parhelia at (C. L. Meller), 56.
- February.  
Mean snowfall of (1896-1916), in New England (C. F. Brooks) (map), 279.
- Finch, Ruy H[erbert].  
Fish killed by the cold wave of February 2-4, 1917, in Florida. 171.  
Missouri earthquake of April 9, 1917 (fig.). 2 p., 187.
- Fires, forest.  
Lightning and forest fires in California (A. H. Palmer) (5 figs.), 4 p., 99.
- Fish.  
Killed by the cold wave of February 2-4, 1917, in Florida (R. H. Finch), 171.
- Floods.  
Rivers and floods during March, 1917 (A. J. Henry) (fig.), 4 p., 124.  
Mississippi River. High water in Memphis district, 1917, S. C. Emery quoted on, 245.  
New Mexico. Floods at Roswell due to heavy rains, 1905-16 (C. Hallenbeck), 216.
- Flora, S[nowden] D.  
Winter indoor aridity in Topeka, Kans. 2 p., 231.
- Flora, S[nowden] D. & Bush, C[arl] L[eroy].  
Damage by hail in Kansas (2 figs.). 2 p., 359.
- Florida.  
Fish killed by cold wave of February 2-4, 1917, in Florida (R. H. Finch), 171.  
Map of, showing extreme minima, 1870-1917 (A. J. Mitchell), 417.  
Quintette of cold waves in, (A. J. Mitchell) (fig., Charts XLV-85-86), 2 p., 416.
- Fluids.  
Dynamics of revolving fluids (Rayleigh), 1 p., *Abstract*, 413.
- Foehn.  
Local wind of the foehn type near San Francisco Bay (B. M. Varney) (fig.), 1 p., 539.  
Meteorology of Greenland's inland ice and its foehn (A. de Quervain), *Abstract*, 601.
- Fog.  
Fog along the California coast (A. H. Palmer) (fig.), 3 p., 496.  
Relative frequency of, at United States lighthouses (U. S. Bureau of Lighthouses), 499.
- Fog-signals.  
Acoustic efficiency of fog-signal machinery (L. V. King), *Abstract*, 442.
- Forecasts.  
On the possibility of forecasting the August temperature for northern Japan (T. Okada), 538.  
Practical hint in forecasting minimum temperatures (W. G. Reed), 590.  
Predicting minimum temperatures (J. Warren Smith), 6 p., 402.
- Forecasting.  
Cold waves and freezing temperatures at Tampa, Fla. (W. J. Bennett), 1 p., 123.
- Forecasts and warnings [monthly], 1917. See Table of Contents.
- Forests and precipitation.  
Forests-and-rainfall experiments (C. Abbe, jr.), 453.
- Fowler, A. & Strutt, R. J.  
Absorption bands of atmospheric ozone in the spectra of sun and stars. *Abstract*, 443.
- France.  
Area of, compared with that of the United States (map), 487.  
Map showing battle line of September 22, 1917, 488.  
Notes on the climate of France and Belgium (P. C. Day) (7 figs.), 10 p., 487.
- Frankenfield, H[arry] C[rawford].  
Forecasts and warnings [monthly], 1917: 119, 241, 370, 457, 544.  
"Northerners" of the Canal Zone (5 figs.), 4 p., 546.  
Tornadoes and windstorms of May 25-June 6, 1917 (12 figs.) (Charts XLV-59-67), 7 p., 291.
- French, H. A.  
Lunar rainbow [at Porthill, Idaho]. 485.
- Frequency values.  
Skew frequency curve applied to stream-gage data (W. G. Reed) (fig.), 1 p., 128.
- Friction.  
Relation between pressure gradient, wind, and friction in steady motion (F. Åkerblom), *Abstract*, 455.
- Frosts.  
Risk of destructive frost in Kentucky (F. J. Walz) (4 figs.), 4 p., 349.
- Galitzin. See Golitsyn.
- Gallia, Ohio.  
Halo of October 3, 1917, at (J. S. Houser) (fig.), 486.
- Gases.  
Computation and measurement of the complex molecules of some vapors, according to the new condensation theory, *Abstract*, 452.  
Condensation and evaporation of gas molecules (I. Langmuir), *Abstract*, 452.
- Gauthier, R.  
Centennial of meteorological station at the Grand Saint-Bernard. *Abstract*, 603.
- Geophysics.  
Need of geophysical observing stations (P. Gruner), *Abstract*, 577.
- Glaciers.  
Aqueous exchange between the névé and the atmosphere (R. Billwiller), *Abstract*, 601.  
Variations of Alpine glaciers (P. L. Mercanton), *Abstract*, 601.
- Glasgow.  
Arithmetic mean and the "middle" value of certain meteorological observations [at] (L. Becker), *Abstract*, 543.
- Glaze.  
Formation of, discussed in C. F. Marvin's "Notes and comments on Hellmann's classification of the hydrometeors," 18.  
"Glazed roads"; "Ammil" (C. Abbe, jr.), 500.  
"Glazed roads."  
Term defined by Meteorological Office, 500.
- Gockel, A.  
Polarization of skylight. *Abstract*, 576.
- Golitsyn, Boris B[orisovich].  
Lowest air temperature at a meteorological station [—68° C.]. 407.
- Gradient.  
Relation between pressure-gradient, wind, and friction in steady motion (F. Åkerblom), *Abstract*, 455.
- Grand Saint-Bernard.  
Centennial of meteorological station at, (R. Gauthier), *Abstract*, 603.
- Grasshoppers.  
At sea (W. E. Hurd), 11.
- [Great Britain. Admiralty.] Chairman.  
Time-zones at sea, *Abstract*, 603.
- Great Britain. Meteorological Office.  
Device for observing radiants of auroras. Reprinted. 486.
- Greenland.  
Meteorology of Greenland's inland ice and its foehn (A. de Quervain), *Abstract*, 601.
- Gregg, Willis Ray.  
Improved kite hygrometer and its records (4 figs.), 2 p., 153.  
Weather Bureau exhibit at the First Pan-American Aeronautic Exposition (6 figs.), 55.
- Growing season.  
Killing frost and length of the growing season in various sections of Kentucky (F. J. Walz) (4 figs.), 6 p., 348.
- Gruner, P.  
Need of geophysical observing stations. *Abstract*, 577.
- Hail.  
Damage by, in Kansas (S. D. Flora & C. L. Bush) (2 figs.), 2 p., 359.  
In the United States [1906-1915] (A. J. Henry) (5 figs.), 5 p., 94.  
Nebraska hailstorm of August 8, 1917 (G. A. Loveland) (fig.), 2 p., 540.
- Hailstones.  
Structure of hailstones of exceptional form and size (F. E. Lloyd), *Abstract*, 412.
- Hailstorms.  
Unusual hailstorm at Ballinger, Tex., (E. M. Eubank), 118.
- Hale, G. E. & Ellerman, F.  
Minute structure of the solar atmosphere. *Abstract*, 532.
- Hall, Maxwell.  
Dark day of May 19, 1780, in Jamaica. Quoted on, 12, 366.  
Parhelia 90° from the sun seen in Jamaica [April 10, 1917] (fig.), 1 p., 399.  
West Indies hurricanes as observed in Jamaica (9 figs.), 11 p., 578.
- Hallenbeck, Cleve.  
Summer types of rainfall in upper Pecos Valley (5 figs.), 8 p., 209.



- Halos.**  
 Halos of October 3, 1917, in Texas and Ohio (Tannehill; Houser) (2 figs.), 486.  
 Halo phenomena, April 8, 1917, at York, N. Y. (M. N. Stewart), 207.  
 Solar halo at Vicksburg, Miss., April 24, 1917 (W. E. Barron), 207.  
**Halos, horizontal.**  
 On horizontal halos (Y. Tsuiji) (fig.), 207.  
**Hand, Irving F[orrest].**  
 Aurora of August 25, 1917, at Washington, D. C., observed by. 399.  
 Solar and sky radiation measurements during September, 1917, 440.  
**Harger, R. L.**  
 Desiccation of Africa. *Abstract*, 301.  
**Harris, Rollin Arthur, 1863-1918.**  
 Obituary of (C. Abbe, jr.), 605.  
**Hawaiian Islands.**  
 Oahu. Free-air data in, July, 1915 (W. E. Ellis), 3 p., 52.  
 Oahu. Relation between precipitation and runoff in Hillebrand Glen, Nuuanu Valley, Oahu, Hawaii (R. C. Rice) (6 figs.), 3 p., 178.  
**Haze.**  
 Smoke cloud and high haze of 1916 (H. H. Kimball), 2 p., 49.  
 "Helada" (Chile). *See* Dew (frozen).  
**Hellmann, Gustav.**  
 Classification of the hydrometeors—concluded. 4 p., *Transl.*, 13.  
 Motion of the air in the lowest layers of the atmosphere. *Abstract*, 454.  
**Henning, R.**  
 Audibility of thunder on the Baltic, observations cited, 367.  
**Henry, Alfred J[udson].**  
 Accidental pressure variations in the United States. 1 p., 290.  
 Changes in the Weather Bureau program of meteorological observations. *Abstract*, 411.  
 Density of snow, with Note on the disappearance and settling of snow in 1915-16 near Reno, Nev., by H. F. Alciatore [bibliography] (2 figs.). 11 p., 102.  
 Forecasts and warnings, 1917 [monthly]: 415, 502, 607.  
 Hail in the United States [1906-1915] (Charts XLV-28-32). 5 p., 94.  
 Rivers and floods during March, 1917 (fig.). 4 p., 124.  
 Rivers and floods, 1917 [monthly]: 25, 72, 124, 176, 245, 371, 418, 462, 509, 551, 614.  
**Hessel, Mich.**  
 Aurora of August 26, 1916, at (F. E. Nipher), 5.  
**Hillebrand Glen.** *See* Hawaii, Oahu.  
**Hirshberg, Leonard Keene.**  
 Hail squall of May 1, 1917, and accompanying weather, Baltimore, Md. 236.  
**Homoclines.**  
 Referred to (G. Taylor), 590.  
**Honolulu.**  
 Lunar total eclipse of December 27-28, 1917 (C. A. Reichelt), 575.  
**Horton, Robert E.**  
 New evaporation formula. *Abstract*, 453.  
**Houser, J. S.**  
 Halo of October 3, 1917, in Ohio (fig.). 486.  
**Houston, Tex.**  
 Halo of October 3, 1917, at (I. R. Tannehill) (fig.), 486.  
**Humidity.**  
 Settlement of tropical Australia (G. Taylor) (fig.), 2 p., 589.  
**Humphreys, William J[ackson].**  
 Earthquakes in the United States during 1917 (Chart XLV-122). 621.  
 Seismological abbreviations used in instrumental reports. 26, 373.  
 Seismological reports [monthly], 1917: 26, 73, 130, 182, 247, 308, 373, 419, 463, 512, 551, 615.  
**William Bullock Clark, 1860-1917.** 1 p., 367.  
**Hurd, Willis Edwin.**  
 Grasshoppers at sea. 11.  
**Hurricanes.**  
 Hurricanes of 1917 (C. A. Donnel) (Chart XLV-121), 612.  
 Tropical storm of September 21-29, 1917 (H. C. Frankenfield), 2 p., 457.  
 Tropical hurricane of September 27-28, 1917, in southeastern Louisiana (R. A. Dyke) (2 figs.), 2 p., 506.  
 West Indies hurricanes as observed in Jamaica (M. Hall) (9 figs.), 11 p., 578.  
**Hydrometeors.**  
 Classification of, (G. Hellmann) [concluded], 4 p., *Transl.*, 13.  
 Notes and comments on Hellmann's classification of, (C. F. Marvin), 2 p., 17.  
**Hydrometer.** *See* Areometer. *See also* Densimeter.  
**Hygrometer.**  
 Improved kite hygrometer and its records (W. R. Gregg) (4 figs.), 2 p., 153.  
**Hygrometry.**  
 Improved methods in (A. N. Shaw), *Abstract*, 412.  
**Ice.**  
 Vapor pressure of (S. Weber), *Abstract*, 542.  
**Instruction.**  
 Demonstration of horizontal and intersecting rainbows (K. Otake), *Reprinted*, 5.  
 Meteorological courses for aeronautical engineers (C. F. Marvin), with syllabus of lectures by R. DeC. Ward, 298.  
**Instruments.**  
 Some new instruments for oceanographical research (H. Pettersson) (7 figs.), 5 p., 159, 236.  
**Insurance.**  
 Damage by hail in Kansas (S. D. Flora & C. L. Bush) (2 figs.), 2 p., 359.  
**Ionization.**  
 Effect of terrestrial relief on ionic densities in the atmosphere (P. L. Mercanton), *Abstract*, 443.  
**Irkutsk.**  
 Correlation of temperature with San Francisco (T. Okada) (fig.), 239.  
**Isocorrelational charts.** *See* Correlation.  
**Jackson, W. E. W.**  
 Magnetic storm of August 26-27, 1916, *Abstract*, 400.  
**Jamaica, B. W. I.**  
 "Dark day of May 19, 1780," observed in, (M. Hall)? 12, 366.  
 Parhelia 90° from the sun seen in [April 10, 1917] (M. Hall) (fig.), 4 p., 399.  
 West Indies hurricanes as observed in (M. Hall) (9 figs.), 11 p., 578.  
**James, John West, 1838-1917.**  
 Obituary of (C. J. Root), 501.  
**January.**  
 Mean snowfall of (1896-1916), in New England (C. F. Brooks) (map), 278.  
**Japan.**  
 Some researches in the Far Eastern seasonal correlations: Second note (T. Okada) (2 figs.), 2 p., 238.  
 Same: Third note (T. Okada), 1 p., *Abstract*, 299.  
 Same: Fourth note (T. Okada) (fig.), 4 p., 535.  
**Jones, James.**  
 Great thunderstorm of August 1, 1917, in Trinity County, Cal., 500.  
**Juneau, Alaska.**  
 Avalanche wind at, January 26, 1917 (M. B. Summers), 114.  
**Jupiter.**  
 Surface currents of [1916-17] (S. Bolton), *Abstract*, 443.  
**Kadel, Benjamin C[inton].**  
 Anemometer records on a Buffalo office building compared with those secured near the surface of Lake Erie (fig.). 3 p., 156.  
**Kansas.**  
 Damage by hail in (S. D. Flora & C. L. Bush) (2 figs.), 2 p., 359.  
**Kentucky.**  
 Killing frost and length of growing season in various sections of Kentucky (F. J. Walz) (4 figs.), 6 p., 348.  
**Keyes, Charles Rollin.**  
 Competency of wind in land depletion. 2 p., 57.  
**Keyser, E[lgie] M.**  
 Annual rise of the Columbia River, 1917 (fig.). 1 p., 509.  
**Kikuchi, Baron Dairoku, 1855-1917.**  
 Obituary of (T. C. Mendenhall), 2 p., 603.  
**Kimball, Herbert Harvey.**  
 Measurement of the effect of city smoke [Lincoln, Nebr.]. 4.  
 Smoke cloud and the high haze of 1916. 2 p., 49.  
 Solar and sky radiation measurements during 1917 [monthly]: 2, 48, 92, 150, 204, 268, 336, 398, 482, 530, 574.  
**Kimball, Herbert Harvey & Thiessen, Alfred H[enry].**  
 City smoke and daylight illumination intensities (fig.). 2 p., 205.  
**Kincer, Joseph Burton.**  
 Relation of weather to the amount of cotton ginned during certain periods (2 figs.). 5 p., 6.  
**Kincer, Joseph Burton.** Co-author. *See* Reed & Kincer.  
**King, L. V.**  
 Acoustic efficiency of fog-signal machinery. *Abstract*, 442.  
**King, W. F.**  
 Successors to, in Canadian positions, 456.  
**Kirkpatrick, R[alph] Z.**  
 Historical notes on "northers" in the Canal Zone (5 figs.). 4 p., 546.  
**Kites.**  
 Peculiar streak in line with kite wire (B. J. Sherry), 269.  
**Klotz, Otto [Julius].**  
 Appointed Chief Astronomer and Director, Dominion Observatory, Toronto, 456.

- Knoche, W.  
Cited on "helada" or frozen dew, 500.
- Knoche, W. & Laub, J.  
Observations of atmospheric electricity during the total solar eclipse on October 10, 1912, at Boa Vista, Brazil. *Abstract*, 443.
- "Kona" storms.  
Nature of (A. J. Henry), 608.
- Kruse, Paul J. Co-author. See Thorndike & Kruse.
- Laboratory work.  
Demonstration of horizontal and intersecting rainbows (K. Otake), *Reprinted*, 5.
- Langmuir, I.  
Condensation and evaporation of gas molecules. *Abstract*, 452.
- Larmor, J. & Yamaga, N.  
Permanent periodicity of sunspots. *Abstract*, 576.
- Leeward Islands.  
Limits defined, with map, 455.
- Lightning.  
Lightning and forest fires in California (A. H. Palmer) (5 figs.), 4 p., 99.
- Lightships.  
Meteorological observations on U. S. lightships (H. E. Williams), 114.
- Lincoln, Nebr.  
Measurement of the effect of city smoke at (H. H. Kimball), 4.  
Solar radiation intensities at [monthly]: 3, 48, 92, 150, 204, 268, 337, 398, 440, 482, 530, 575.
- Lloyd, F. E.  
Structure of hailstones of exceptional form and size. *Abstract*, 412.
- London, England.  
Excessive precipitation in, June 16, 1917 (H. R. Mill), 453.
- Long Island, N. Y.  
Influence of the sea on the climate of (E. S. Clowes), 347.  
Seabreeze on eastern Long Island (E. S. Clowes) (2 figs.), 2 p., 345.
- Los Angeles, Cal.  
Temperatures of 100°F., and over, 1877-1917 (F. A. Carpenter), 410.  
Thermogram recorded at, during hot wave of June 14-17, 1917 (fig.), 409.
- Louisiana.  
Tropical hurricane of September 27-28, 1917, in southeastern Louisiana (R. A. Dyke) (2 figs.), 2 p., 506.
- Louisville, Ky.  
Barogram during the New Albany, Ind., tornado of March 23, 1917 (F. J. Walz), 171.
- Loveland, George A.  
Nebraska hailstorm of August 8, 1917 (fig.). 2 p., 540.
- Lyman, Herbert.  
Greatest 24-hour rainfall at Washington, D. C., [1870-1917]. 454.
- McAtee, Waldo L.  
Showers of organic matter. 8 p., 217.
- Madison, Wis.  
Solar radiation intensities at [monthly]: 3, 48, 92, 150, 204, 258, 336, 398, 440, 482, 530, 574.
- Magnetic storms.  
Of August 26-27, 1916 (W. E. W. Jackson), *Abstract*, 400.
- Manning, Douglas F.  
Aurora of August 21, 1917 [observed at Alexandria Bay, N. Y.]. 399.  
Earth tremor due to thunder notes. 515.  
Formation of winter stratus; depth of northeast wind, 60.
- Manti National Forest, Utah.  
Some field experiments on evaporation from snow surfaces in (F. S. Baker) (2 figs.), 3 p., 363.
- March.  
Mean snowfall [1896-1916] of, in New England (C. F. Brooks) (map), 280.
- Marvin, Charles Frederick.  
Meteorological courses for aeronautical engineers (with syllabus of lectures on Meteorology in, by R. DeC. Ward). 1 p., 298.  
Notes and comments on Hellmann's classification of hydrometeors. 2 p., 17.  
Shall we revise our nomenclature for thermometric scales? 1 p., 534.
- Marvin, Charles Frederick, *translator*.  
On working-up precipitation observations (H. Meyer). 4 p., 164.
- Maryland State Weather Service.  
Death of director of (W. J. Humphreys; C. Abbe, jr.), 367.
- Masini, A.  
Factors influencing the condensation of aqueous vapor in the atmosphere. *Abstract*, 412.
- Masson, Orme.  
Influence of weather conditions on the amounts of nitrogen acids in the rainfall and atmosphere in Australia. *Reprinted*, 501.
- Mattoon, Ill.  
Tornado of May 26, 1917, at (H. C. Frankenfield) (2 figs.), 293.
- Maurer, J.  
Solar coronæ: Five years' recent observations, *Abstract*, 577.
- Means.  
Arithmetic mean and the "middle" value of certain meteorological observations (L. Becker), *Abstract*, 543.  
Reduction of air temperatures at Swedish stations to a true mean (N. Ekholm), 1 p., *Abstract*, 58.  
Use of monthly mean values in climatological analysis (E. G. Bilham), *Abstract*, 602.
- Meinzer, O[scar] E.  
Quoted on the divining rod, 300.
- Meller, C. L.  
Quoted on parhelic circle with two pairs of parhelia at Fargo, N. Dak., 56.
- Mendenhall, Thomas Corwin.  
Baron *Dairoku Kikuchi*, 1855-1917. 2 p., 603.
- Mercanton, P. L.  
Discusses variations of Alpine glaciers. *Abstract*, 601.  
Effect of terrestrial relief on ionic densities in the atmosphere. *Abstract*, 443.
- Mercury (element).  
Evaporation of mercury droplets suspended in a gas (Schidlof & Karpowicz), *Abstract*, 413.
- Meteorographs.  
Improved kite hygrometer and its records (W. R. Gregg) (5 figs.), 2 p., 153.
- Meteorological stations.  
Locations of, in the Panama Canal zone (map), 549.
- Meteorology, military. See also Aeronautics, Meteorology, etc.  
Cooperation of the Weather Bureau in forming a military field meteorological service in France (R. DeC. Ward), 592.  
Meteorology and war-flying (R. DeC. Ward), 10 p., 591.  
Weather Bureau and the War (E. B. Calvert), *Abstract*, 411.
- Methods.  
Reduction of air temperatures at Swedish stations to a true mean (N. Ekholm), 1 p., *Abstract*, 58.
- Meyer, Hugo.  
Quoted on On working-up of precipitation observations, 4 p., *Transl.*, 164.
- Mikesell, Thomas, 1845-1917.  
Obituary of. (J. Warren Smith) (portrait), 368.
- Mill, Hugh Robert.  
Awarded Symons Memorial Medal, 1918, 606.  
Excessive precipitation in London [June 16, 1917]. 453.
- Miller, Clarence E.  
Distance at which thunder can be heard. 366.
- Minnesota.  
Earthquake of September 3, 1917 (C. J. Posey) (fig.), 2 p., 556.
- Mississippi River.  
Diagram showing locations of points on the lower stretch of (R. A. Dyke) (map), 508.
- Missouri.  
Memorandum on the Missouri earthquake of April 9, 1917 (S. Paige), 318.
- Mitchell, Alexander J.  
Quintette of cold waves in Florida (fig.) (Charts xlv-85-86). 2 p., 416.
- Mitsukuri, Kakichi.  
Younger brother of Dairoku Kikuchi (q. v.), 603.
- Miyako, Japan.  
April pressure-difference Ponta Delgada-Stykkisholm correlated with the mean August temperature of Nemuro + Miyako (T. Okada), 535.
- Miyazaki, Japan.  
Correlation between the March pressure-difference Zi-ka-wei-Miyazaki and the mean of the following August temperatures at Nemuro+Miyako (T. Okada), 535.
- Mize, Ralph C.  
Waterspouts visit Tatoosh Island, Wash. 601.
- Montagu, Lord.  
World's air routes and their regulation. *Reprinted*, 270.
- Moon.  
Lunar period in the rates of evaporation and rainfall (J. R. Sutton), 501.  
Relation between sunlight and moonlight (J. S. Dow), *Abstract*, 532.
- Moore, B.  
Nitrites from nitrates by sunlight. *Abstract*, 602.



- Moran, J.  
Release of radium emanation from water at different temperatures. *Abstract*, 443.
- Mossman, R. C.  
Some aspects of the cold period, December, 1916—April, 1917. *Abstract*, 289.
- Motion.  
Motion of a particle on the surface of a smooth rotating globe (F. J. W. Whipple), *Abstract*, 454.
- Mount Shasta, Cal.  
View of (A. H. Palmer), 102.
- Mountain snowfall measurements.  
Density of snow (A. J. Henry); with a note on the disappearance, etc., (2 figs.) [bibliography], 11 p., 102.
- Nakamura, Saemontarō.  
Notes on the horizontal rainbow. *Reprinted*, 4.
- Nebraska.  
Hallstorm of August 8, 1917 (G. A. Loveland) (fig.), 2 p., 540.
- Nemuro, Japan.  
April pressure-difference Ponta Delgada—Stykkisholm correlated with the mean August temperature at Nemuro—Miyako (T. Okada), 535.
- Nevada.  
... Growth, settling, and final disappearance of a snow cover in the Sierra Nevada (fig.), 2 p., 109.
- New Albany, Ind.  
Tornado of March 23, 1917, at (F. J. Walz) (2 figs.), 2 p., 169.
- New England.  
Hypsometric map of (Amer. Geog. Soc.). Scale 1:3,500,000, 272.  
Meteorological stations in (map) (C. F. Brooks), 272.  
Snowfall of (C. F. Brooks) (30 figs.), 15 p., 271.
- New Mexico.  
Hypsometric map of southeastern New Mexico (C. Hallenbeck), 1 p., 212.
- New Zealand.  
Standard Time suggested for (Wellington Philosophical Soc.), 543.
- Nipher, Francis E.  
Aurora of August 26, 1916, observed at Hessel, Mich. 5.
- Nitrogen.  
Nitrites from nitrates by sunlight (B. Moore), *Abstract*, 602.
- Nomenclature.  
Shall we revise our nomenclature for thermometric scales? (C. F. Marvin), 534.
- Normals.  
Reduction of temperatures at Swedish stations to a true mean (N. Ekholm), 1 p., *Abstract*, 58.
- North Atlantic Ocean.  
Weather conditions on, during 1916 [monthly]. See Table of Contents.
- "Northerners."  
Duboc quoted on, in the Panama Canal zone prior to July, 1881, (Kirkpatrick), 546.  
Historical notes on, in the Panama Canal zone (R. Z. Kirkpatrick), 546.  
Northerners in the Panama Canal zone (A. J. Henry), 503.  
Of the Panama Canal zone (H. C. Frankenfield) (4 maps), 4 p., *Transl.*, 546.  
In Panama, December 30—31, 1917, 609.
- November.  
Mean snowfall (1895—1915) of, in New England (C. F. Brooks) (map), 276.
- Observations.  
Changes in Weather Bureau program of meteorological observations (A. J. Henry), *Abstract*, 411.  
Device for observing radiants of auroras (Great Britain Meteorological Office), 486.  
On working up of precipitation observations (H. Meyer), 4 p., *Transl.*, 164.
- Observatories.  
Meteorological observations on U. S. lightships (H. E. Williams), 114.  
Need of geophysical observing stations (P. Gruner), *Abstract*, 577.  
*Grand Saint-Bernard*, Switzerland. Centennial of meteorological station at (R. Gauthier), 603.  
*Kempshot*, Jamaica. View of, facing 578.
- Observers.  
*Henry B. Scudder, 1844—1917*, obituary of, (G. N. Salisbury), 414.
- Ocean currents.  
Chart of average annual (fig.), 490.
- Oceanography. See Oceans.
- Oceans.  
Some new instruments for oceanographical research (H. Pettersson) (7 figs.), 5 p., 159, 236.
- Oceans and climate.  
Influence of the sea on the climate of Long Island, N. Y. (E. S. Clowes), 347.
- Ogilvie, Noel J.  
Appointed superintendent Canadian Geodetic Survey, 456.
- Ohio.  
Prediction of minimum temperatures in (J. Warren Smith), 4p., 403.  
Tornadoes of March 11, 1917, in Montgomery County (R. F. Young) (fig.), 1 p., 117.
- Okada, T.  
Some researches in the Far Eastern seasonal correlations: Second note (2 figs.), 2 p., 238.  
Same: Third note, *Abstract*, 1 p., 299.  
Same: Fourth note (fig.). 4 p., 535.
- Optical phenomena.  
Atmospheric optical disturbances, Fall of 1911 to February, 1917 (C. Dorno), 1 p., 483.  
Observations of the neutral points of atmospheric polarization from great heights (A. Wigand), *Abstract*, 531.  
Smoke cloud and the high haze of 1916 (H. H. Kimball), 2 p., 52.  
Solar coronæ: Five years' recent observations (J. Maurer), *Abstract*, 577.
- Otobe, Kōkichi.  
Demonstration of horizontal and intersecting rainbows. *Reprinted*, 5.  
Equation of horizontal rainbows (5 figs.). 2 p., *Reprinted*, 151.
- Ozone.  
Absorption bands of atmospheric ozone in the spectra of sun and stars (A. Fowler & R. J. Strutt), *Abstract*, 443.  
Nitrites from nitrates by sunlight (B. Moore), *Abstract*, 602.
- Paige, Sidney.  
Memorandum on the Missouri earthquake of April 9, 1917. 318.
- Palmer, Andrew Henry.  
Fog along the California coast (fig.). 3 p., 496.  
Lightning and forest fires in California (4 figs.). 4 p., 99.
- Pan-American Aeronautic Exposition, First.  
Weather Bureau exhibit at (W. R. Gregg) (6 figs.), 1 p., 55.
- Panama Canal.  
Duboc quoted on "northerners" in the Panama Canal zone prior to July, 1881 (Kirkpatrick), 546.  
Historical notes on "northerners" in the Panama Canal zone (R. Z. Kirkpatrick), 546.  
Meteorological stations in, located (map), 549.  
Northerners in (A. J. Henry), 503.  
Northerners of the Panama Canal zone (H. C. Frankenfield) (5 figs.), 4 p., 546.
- Parana (river).  
Skew frequency-curve applied to stream-gage data (W. G. Reed) (fig.), 1 p., 128.
- Paraselenes, with tail.  
Observed at York, N. Y., April 7, 1917 (M. N. Stewart), 208.
- Parhelia.  
Parhelia of 90° from the sun in Jamaica [April 10, 1917] (M. Hall) (fig.), 399.  
Parhelic circle with two pairs of parhelia at Fargo, N. Dak. (C. L. Meller), 56.
- Patterson, J.  
Comparison of Callendar sunshine recorder and Ångström pyrheliometer [with a note by H. H. Kimball]. *Abstract*, 400.
- Pecos Valley, N. Mex.  
Summer types of rainfall in upper Pecos Valley (C. Hallenbeck) (5 figs.), 8 p., 209.
- Pensacola, Fla.  
Pressures and wind velocities at, during hurricane of September 28, 1917, 459.
- Pettersson, Hans.  
Some new instruments for oceanographical research (7 figs.), 5 p., 159, 236.
- Phonometer (of S. G. Webster).  
Description of, 442.
- Picard, L.  
Lunar total eclipse, 1917, July 4. *Abstract*, 575.
- Pickering, William Henry.  
Why the axes of the planets are inclined (2 figs.). *Reprinted*, 1 p., 532.
- Planetary meteorology.  
Surface currents of Jupiter [1916—17] (S. Bolton), *Abstract*, 443.
- Planets.  
Why the axes of the planets are inclined (W. H. Pickering) (2 figs.), 1 p., *Reprinted*, 532.
- Plaskett, J. S.  
Appointed Director, Dominion Astrophysical Observatory, Victoria, B. C., 456.
- Polarization.  
Of skylight (A. Gockel), *Abstract*, 576.



- Ponta Delgada, Azores.  
Correlation between the April pressure in the Azores and the August temperature in northern Japan (T. Okada), 299.  
April pressure-difference Ponta Delgada—Stykkisholm correlated with the mean August temperature at Nemuro+Miyako (T. Okada), 535.
- Posey, Charles J.  
Minnesota's earthquake of September 3, 1917 (fig.). 2 p., 556.
- Precipitation.  
Daily precipitation in the Tennessee basin, March, 1915 (A. J. Henry), 124.  
Mean annual rainfall of the United States, with notes on the new chart of average annual precipitation from the "Atlas of American Agriculture" (Advance sheet) [Bibliography] (fig.) (R. DeC. Ward) (Chart XLV-76), 7 p., 338.  
New England snowfall (C. F. Brooks) (30 figs.), 15 p., 271.  
On the working-up of precipitation observations (H. Meyer), 4 p., Transl., 164.  
Showers of organic matter (W. L. McAtee), 8 p., 217.  
Summer types of rainfall in upper Pecos Valley (C. Hallenbeck) (5 figs.), 8 p., 209.  
Sunspots, magnetic storms, and rainfall (H. Arctowski) (fig.), 1 p., 538.
- Precipitation, excessive.  
Greatest 24-hour rainfall at Washington, D. C. [1870-1917] (H. Lyman), 454.  
Heaviest rainfall in the British Isles, at Bruton, Somerset, 9.84 inches, June 28, 1917, 501.  
London. June 16, 1917 (H. R. Mill), 453.
- Precipitation and run-off.  
Relation between, in Hillebrand Glen, Nuuanu Valley, Oahu, Hawaii, (R. C. Rice) (6 figs.), 3 p., 178.
- Pressure.  
Remarkable fall (0.51 inch in 4 hours) at Washington, D. C., Dec. 8, 1917, 609.
- Pressure changes.  
Accidental pressure variations in the United States (A. J. Henry), 1 p., 290.
- Prospect, Bermuda.  
Correlation between the April pressure in the Bermudas and the August temperature in northern Japan (T. Okada), 299.
- Publications.  
Modern Chinese meteorological monthly (C. Abbe, jr.), 113.
- Pyrheliometers, comparisons of.  
Comparison of Callendar sunshine recorder and Ångström pyrheliometer (J. Patterson), Abstract, 400.
- Radiation. See also Ultra-violet.  
Absorption bands of atmospheric ozone in the spectra of sun and stars (A. Fowler & R. J. Strutt), Abstract, 443.  
Daily totals and departures of solar and sky radiation [monthly] 1917: 4, 49, 93, 151, 205, 269, 337, 399, 441, 483, 531, 575.  
For zenithal sun, reduced to mean solar distance of the earth, and approximate values of the solar constant [monthly] 1917: 4, 49, 93.  
Nitrites from nitrates by sunlight (B. Moore), Abstract, 602.  
Solar and sky radiation measurements [monthly], 1917. See Table of Contents.  
Transparency of the atmosphere for ultra-violet radiation (R. J. Strutt), Reprinted, 485.
- Radium emanation.  
Release of radium emanation from water at different temperatures (J. Moran), Abstract, 443.
- Rain, composition of.  
Influence of weather conditions on the amounts of nitrogen acids in the rainfall and atmosphere in Australia (O. Masson), 501.
- Rainbows.  
Lunar rainbow [at Porthill, Idaho] (H. A. French), 485.
- Rainbows, horizontal. See also Halos, horizontal.  
Demonstration of horizontal and intersecting rainbows (K. Otake), Reprinted, 5.  
Equation of horizontal rainbows (K. Otake) (5 figs.), 2 p., Reprinted, 151.  
Notes on, (S. Nakamura), Reprinted, 4.
- Rainfall and gunfire. See Rain-making.
- Rain-making.  
Rainfall and gunfire (A. Angot), 1 p., Abstract, 450.
- Ratzel, Friederich.  
Cited on a kind of "frostbeschlag" resembling "ammil", 500.
- Rauheis.  
Alternate deposition of rauheis and rauheis (W. R. Blair) (fig.), 19.
- Rayleigh, Lord.  
Dynamics of revolving fluids. Abstract, 413.
- Reed, William Gardner.  
Practical hint in forecasting minimum temperatures. 590.  
Skew frequency curve applied to stream gage data (fig.). 1 p.
- Reed, William Gardner, abstractor.  
Argentine meteorological service (W. G. Davis). 60.  
Atmospheric circulation and the weather in Argentina (H. H. Clayton). 60.  
Reduction of air temperature at Swedish stations to a true mean by N. Ekholm. 1 p., 58.  
Report of the meteorological station at Berkeley, Cal., for the year ending June 30, 1915 (3 figs.). 6 p., Author's abstract, 61.
- Reed, William Gardner & Kincer, Joseph Burton.  
Preparation of precipitation charts. 3 p., 233.
- Reichelt, Carl A.  
Lunar total eclipse of December 27-28, 1917, at Honolulu. 575.
- Relative humidity.  
Correlated with the following minimum temperature (J. Warren Smith), 403.  
Effect of humidification of a schoolroom on intellectual progress of the pupils (E. L. Thorndike & P. J. Kruse), 301.  
Winter indoor aridity in Topeka, Kans. (S. D. Flora), 2 p., 231.
- Rice, Roger C.  
Relation between rainfall and run-off in Hillebrand Glen, Nuuanu Valley, Oahu, Hawaii (6 figs.). 3 p., 178.
- Rime (rauhreif).  
Alternate deposition of rauheis and rauheis (W. R. Blair) (fig.), 19.
- Rivers.  
Skew frequency-curve applied to stream-gage data (W. G. Reed) (fig.), 1 p., 128.
- Rivers and floods.  
Reported monthly, 1917 (A. J. Henry). See Table of Contents.
- Riverside, Cal.  
Thermogram recorded at, during hot wave June 14-17, 1917 (fig.), 409.
- Root, Clarence J.  
John West James, 1838-1917. Reprinted, 501.
- Roswell, N. Mex.  
Summer types of rainfall in upper Pecos Valley (C. Hallenbeck) (5 figs.), 8 p., 209.
- Royal Geographical Society of Queensland.  
[Thomson] Foundation Medal of, awarded Griffith Taylor, in 1917, 606.
- Royal Medal.  
Awarded J. Aitken by Royal Society (London), November 30, 1917, 606.
- Royal Meteorological Society.  
Symons Memorial Gold Medal awarded: 1914 to W. H. Dines; 1916 to [C.] A. Angot; 1918 to H. R. Mill, 606.
- Royal Society (London).  
Royal medal of, awarded J. Aitken, November 30, 1917, 606.
- Salisbury, George N.  
Henry B. Scudder, 1844-1917. 414.
- Salt Lake City, Utah.  
City smoke and daylight illumination intensities (H. H. Kimball & A. H. Thiessen) (fig.), 2 p., 205.
- San Bernardino, Cal.  
Thermogram recorded at, during hot wave June 14-17, 1917 (fig.), 409.
- San Diego, Cal.  
Severe local storm at San Diego, Cal., February, 1917, 118.  
Thermogram recorded at, during hot wave June 14-17, 1917 (fig.), 409.
- San Francisco, Cal.  
Correlation between April temperature at Irkutsk and July temperature at San Francisco, Cal., (T. Okada) (fig.), 239.  
Correlation between July temperature at Erimo, Japan, and San Francisco (T. Okada) (fig.), 238.
- San Francisco Bay, Cal.  
Local wind of the foehn type near (B. M. Varney) (fig.), 1 p., 539.
- Santa Barbara, Cal.  
Thermogram recorded at, during hot wave June 14-17, 1917 (fig.), 409.
- Santa Fe, N. Mex.  
Solar radiation intensities at [monthly], 1917: 3, 49, 93, 150 [May, June, July, August omitted], 441, 483, 531, 575.
- Schidlof, A.  
Evaporation and adsorption. Abstract, 413.
- Schidlof, A. & Karpowicz, A.  
Evaporation of mercury droplets suspended in a gas. Abstract, 413.
- Schwellenwerthe. See Threshold values.

- Scientific American.  
Heaviest rainfall in the British Isles, 501.  
Scudder, Henry B., 1844-1917.  
Obituary of (G. N. Salisbury), 414.
- Sea-breeze.  
On eastern Long Island (E. S. Clowes) (2 figs.), 2 p., 345.
- Seeley, Dewey Alsdorf.  
Relation between temperature and crops (3 figs.) [bibliography]. 6 p., 354.
- Seismological dispatches.  
[Monthly], 1917: See Table of Contents.
- Seismological reports.  
[Monthly], 1917: See Table of Contents.
- Shaw, A. N.  
Improved methods in hygrometry. *Abstract*, 412.
- Shaw, Sir Napier.  
Revolving fluid in the atmosphere. *Abstract*, 454.
- Sherry, Bertram J.  
Peculiar streak in line with kite wire (with comments by W. R. Blair). 269.
- Siberia.  
Lowest air temperature at a meteorological station [Verkhoyansk] (Golitsyn), 407.
- Simpson, George C.  
Penetrating radiation in the atmosphere. *Abstract*, 401.
- Simpson, Howard E.  
Photographs of the Antler, N. Dak., tornado of August 20, 1911 (5 figs.). 237.
- Skylight.  
Polarization of (A. Gockel), *Abstract*, 576.
- Smith, J. Warren.  
Predicting minimum temperatures. 6 p., 402.  
Thomas Mikesell, 1845-1917, (Portrait). 1 p., 368.
- Smoke.  
City smoke and daylight illumination intensities (H. H. Kimball & A. H. Thiessen) (fig.), 2 p., 205.  
Measurement of the effect of city smoke [Lincoln, Nebr.] (H. H. Kimball), 4.  
Smoke cloud and the high haze of 1916 (H. H. Kimball), 2 p., 49.
- Snow.  
Density of, with note on disappearance, etc., (A. J. Henry) [bibliography] (2 figs.), 11 p., 102.  
Some field experiments on evaporation from snow surfaces (F. S. Baker) (2 figs.), 3 p., 363.
- Snowfall at high altitudes. See Mountain snowfall measurements.
- Solar and sky radiation measurements. See Radiation.  
See also Kimball, H. H.; Lincoln, Nebr.; Madison, Wis.; Santa Fe, N. Mex.; Washington, D. C.
- Solar relations.  
Sunspots, magnetic storms, and rainfall (H. Arctowski) (fig.), 1 p., 538.
- Spring.  
Cold Spring of 1917 (P. C. Day) (4 figs.), 4 p., 285.  
Some aspects of the cold period, December, 1916-April, 1917 (R. C. Mossman), 289.
- Squalls.  
Hail squall of May 1, 1917, and accompanying weather at Baltimore, Md. (L. K. Hirshberg), 236.
- Standard Time.  
Suggested for New Zealand (Wellington Philosophical Society), 543.
- Staples, Minn.  
Earthquake of September 3, 1917 (C. J. Posey) (fig.), 2 p., 556.
- Stewart, Milroy N.  
Quoted on Halo phenomena at York, N. Y., April 8, 1917, 207.
- Storms.  
Dynamics of revolving fluids (Rayleigh), 1 p., *Abstract*, 413.
- Storms, local.  
Severe local storms during March, 1917 (P. C. Day), 1 p., 137.  
San Diego. Severe local storm at, Feb., 1917, 118.
- Strutt, R. J. See also Fowler, A., & Strutt, R. J.  
Transparency of the atmosphere for ultra-violet radiation. *Reprinted*, 485.
- Stykkisholm, Iceland.  
Correlation between the April pressure in Iceland and the temperature of the following August in northern Japan (T. Okada), 299.  
April pressure-difference Ponta Delgada-Stykkisholm correlated with the mean August temperature at Nemuro-Miyako. (T. Okada), 535.
- "Summer time." See Time.
- Summers, M[elvin] B.  
Avalanche wind at Juneau, January 26, 1917. 114.
- Sun.  
Brester's theory of, *Review*, 485.  
Minute structure of the solar atmosphere (Hale & Ellerman), *Abstract*, 532.
- Sunshine.  
Relation between sunlight and moonlight (J. S. Dow), *Abstract*, 532.
- Sunspots.  
Permanent periodicity of, (Larmor & Yamaga), *Abstract*, 576.
- Sutton, J. R.  
Lunar period in the rates of evaporation and rainfall, *Abstract*, 501.
- Switzerland.  
Bird migration in central Switzerland in relation to meteorological conditions (K. Bretscher), *Abstract*, 1 p., 451.
- Sydney, N. S. W.  
Correlation of January pressure at Sydney and the March pressure-difference at Zi-ka-wei-Miyazaki (T. Okada), 537.
- Symons Memorial Gold Medal.  
Awards of, in 1914, 1916, and 1918, 606.
- Talman, Charles Fitzhugh.  
Letter from B. Golitsyn on minimum temperature at Verkhoyansk, communicated, 407.  
Recent additions to the Weather Bureau Library [monthly], 1917: 33, 78, 135, 189, 254, 319, 381, 426, 468, 516, 559, 623.  
Recent papers bearing on meteorology and seismology [monthly], 1917: 33, 78, 135, 189, 254, 319, 381, 427, 469, 517, 559, 623.
- Tampa, Fla.  
Cold waves and freezing temperatures at (W. J. Bennett), 123.  
Tornado of April 5, 1917, at (W. J. Bennett) (fig.), 1 p., 167.
- Tannehill, I[van] R.  
Halo of October 3, 1917, in Texas (fig.), 486.
- Tatoosh Island, Wash.  
Waterspouts at, (R. C. Mize), 601.
- Taylor, J. W.  
Determines amount of ammonia in dew, *Reprinted*, 19.
- Taylor, Griffith.  
Awarded Thomson Foundation Medal of the Royal Geographical Society, Queensland, 1917, 606.  
Settlement of tropical Australia (fig.). 2 p., 589.
- Temperatures.  
Lowest air temperature at a meteorological station (B. Golitsyn), 407.  
Normal anomalies of mean annual temperature variations (H. Arctowski), *Abstract*, 412.  
Practical hint in forecasting minimum temperatures (W. G. Reed), 590.  
Predicting minimum temperatures (J. Warren Smith), 6 p., 402.  
Relation between temperature and crops (D. A. Seeley) (3 figs.), 6 p., 354.  
Some temperature correlations in the United States (T. A. Blair) (8 figs.), 6 p., 444.
- Tennessee River.  
Rivers and floods during March, 1917 (A. J. Henry) (fig.), 4 p., 124.
- Thermometric scales.  
Shall we revise our nomenclature for thermometric scales (C. F. Marvin)? 534.
- Thiessen, Alfred H[enry], co-author. See Kimball, H. H., & Thiessen, A. H.
- Thomson Foundation Medal.  
Of Royal Geographical Society, Queensland, awarded to Griffith Taylor, 1917, 606.
- Thorndike, Edward L., & Kruse, Paul J.  
Effect of humidification of a schoolroom on the intellectual progress of the pupils, *Extracted*, 1 p., 301.
- Threshold values. See also Schwellenwerthe.  
Referred to (H. Meyer), 167.
- Thunder.  
Distance at which thunder can be heard (C. E. Miller), 366.  
Earth tremor due to thunder notes (D. F. Manning), 515.
- Thunderstorms.  
Great thunderstorm of August 1, 1917, in Trinity County, Cal. (J. Jones), 500.
- Time.  
"Summer time" mentioned and defined (C. Abbe, jr.), in footnote 2, 453.  
Time-zones at sea [Royal Society of Great Britain], *Abstract*, 603.
- Topeka, Kans.  
Winter indoor aridity in (S. D. Flora), 2 p., 231.
- Topography.  
Influence of, on winds and rain at Roswell, N. Mex. (C. Hallenbeck) (map), 212.



- Tornadoes.**  
 Photographs of the Antler, N. Dak., tornado of August 20, 1911 (H. E. Simpson) (5 figs.), 237.  
 Cincinnati, Ohio, March 11, 1917 (W. C. Devereaux) (2 figs.), 2 p., 114.  
 Montgomery County, Ohio, March 11, 1917 (R. F. Young) (fig.), 1 p., 117.  
 New Albany, Ind., March 23, 1917 (F. J. Walz) (2 figs.), 2 p., 169.  
 Tampa, Fla., April 5, 1917 (W. J. Bennett) (fig.), 1 p., 167.  
 Tornadoes and windstorms of May 25-June 6, 1917 (H. C. Frankenfeld) (3 figs, charts xlv-59-67), 7 p., 291.
- Toronto, Canada.**  
 Correlation of the barometric pressure at, in April and August (T. Okada), 299.
- Tsuiji, Y.**  
 On horizontal halos (fig.), 207.
- Ultra-violet radiation.** *See also* Radiation.  
 Transparency of the atmosphere for ultra-violet radiation (R. J. Strutt), *Reprinted*, 485.
- United States.**  
 Accidental pressure variations in (A. J. Henry), 1 p., 290.  
 Climate of, compared with that of France and Belgium (P. C. Day) (7 figs.), 10 p., 487.  
 Earthquake felt in, during 1917 (W. J. Humphreys) (Chart xlv-122), 1 p., 621.  
 Hail in [1906-1915] (A. J. Henry) (5 figs.), 5 p., 94.  
 Mean annual rainfall of, with notes on the new chart of average annual precipitation from the "Atlas of American Agriculture" (Advance sheet) [Bibliography] (fig.) (R. DeC. Ward) (Chart xlv-76), 7 p., 338.  
 Mountain snowfall measurements in (A. J. Henry), 5 p., 103.  
 Relative frequency of fog at U. S. lighthouses (U. S. Bureau of Lighthouses), 499.  
 Some temperature correlations in, (T. A. Blair) (8 figs.), 6 p., 444.  
 United States Bureau of Lighthouses.  
 Relative frequency of fog at U. S. lighthouses. *Reprinted*, 499.  
 United States Geographic Board.  
 Opinion on limits of Leeward and Windward Islands (map), 455.  
 United States National Advisory Committee on Aeronautics.  
 Meteorological courses for the instruction and training of aviators established by, 298.  
 United States Survey of the Northern & Northwestern Lakes.  
 Levels of the Great Lakes [monthly], 1917: *See* Table of Contents.
- Vapor pressure.**  
 At pyrrometric stations [monthly], 1917: 3, 49, 93, 151, 205, 269, 337, 399, 441, 483, 531, 575.  
 Of ice (S. Weber), *Abstract*, 542.
- Varney, Burton M.**  
 Local wind of the foehn type near San Francisco Bay (fig.). 1 p., 539.
- Verkhoyansk, Siberia.**  
 Lowest air temperature at, corrected (B. B. Golitsyn), 407.
- Vicksburg, Miss.**  
 Solar halo at, April 24, 1917 (W. E. Barron), 207.
- Wagon Wheel Gap, Colo.**  
 Forests-and-rainfall experiments (C. Abbe, jr.), 453.
- Walz, Ferdinand J[ackson].**  
 Killing frost and length of growing season in various sections of Kentucky (4 figs.). 6 p., 348.  
 Tornado of March 23, 1917, at New Albany, Ind. (2 figs.), 2 p., 169.
- Ward, Robert DeC[ourcy].**  
 Lectures on Meteorology in the course in Aeronautical Engineering at Massachusetts Institute of Technology in cooperation with Harvard University (syllabus). 298.  
 Mean annual rainfall of the United States, with notes on the new chart of average annual precipitation from the "Atlas of American Agriculture" (Advance sheet) (fig., Chart xlv-76) [bibliography]. 7 p., 338.  
 Meteorology and war-flying. 10 p., 591.
- Warm waves.**  
 Notes on the hot wave in southern California, June 14-17, 1917 (F. A. Carpenter) (5 figs.), 3 p., 408.
- Washington, D. C.**  
 Aurora of August 25, 1917, observed at (I. F. Hand; C. Abbe, jr.), 399.  
 Greatest 24-hour rainfall at [1870-1917] (H. Lyman), 454.  
 Remarkable fall in barometric pressure (0.51 inch in 4 hours) on December 8, 1917, 609.  
 Solar radiation intensities at, during 1917 [monthly]: 3, 48, 92, 150, 204, 268, 336, 398, 440, 482, 530, 574.
- Waterspouts.**  
 At Tatoosh Island, Wash. (R. C. Mize), 601.
- Wauseon, Ohio.**  
 Death of coöperative observer Thomas Mikesell, 1917 (J. Warren Smith), 368.
- Weather Bureau.**  
 Changes in program of meteorological observations (A. J. Henry), *Abstract*, 411.  
 Cooperation of, in forming a military field meteorological service in France (R. DeC. Ward), 592.  
 Exhibit at the First Pan-American aeronautic exposition (W. R. Gregg) (6 figs.), 1 p., 55.  
 Weather Bureau and the war (E. B. Calvert), *Abstract*, 411.
- Weather influences.**  
 Relation of weather to the amount of cotton ginned during certain periods (J. B. Kincer) (2 figs.), 5 p., 6.
- Weather of the month.**  
 Monthly report (P. C. Day), 1917. *See* Table of Contents.
- Weather services.**  
 Argentina. Argentine meteorological service (W. G. Davis), *Abstract*, 1 p., 60.  
 Colombia. Law establishing National meteorological service in, 11.
- Weber, S.**  
 Vapor pressure of ice. *Abstract*, 542.
- Wegner, W. H.**  
 Tornado photographs by, from Antler, N. Dak. (5 figs.). 238.
- Wellington, N. Z., Philosophical Society.**  
 New Zealand standard time, 543.
- Whipple, F. J. W.**  
 Motion of a particle on the surface of a smooth rotating globe. *Abstract*, 454.
- Wigand, A.**  
 Observations of the neutral points of atmospheric polarization from great heights. *Abstract*, 531.
- Williams, Henry Eugene.**  
 Meteorological observations on U. S. lightships. 114.
- Windroses.**  
 Direction-velocity windroses for Cincinnati, Ohio, 1915-17 (W. C. Devereaux) (3 figs.), 4p., 227.
- Winds.**  
 Anemometer records on a Buffalo office building compared with those secured near the surface of Lake Erie (B. C. Kadel) (fig.), 3 p., 156.  
 As a distributing agent of organisms (W. L. McAtee), 223.  
 Avalanche wind at Juneau, Alaska, January 26, 1917 (M. B. Summers), 114.  
 Charts of ocean winds (Summer and Winter) after Koeppen (2 figs.), 489.  
 Competency of, in land depletion (C. R. Keyes), 2 p., 57.  
 Depth of northeast (D. Manning), 60.  
 Motion of a particle on the surface of a smooth rotating globe (F. J. W. Whipple), *Abstract*, 454.  
 Motion of the air in the lowest layers of the atmosphere (G. Hellmann), *Abstract*, 454.  
 Relation between pressure-gradient, wind, and friction, in steady motion (F. Åkerblom), *Abstract*, 455.  
 Revolving fluid in the atmosphere (N. Shaw), *Abstract*, 454.
- Windward Islands.**  
 Limits defined, with map, 455.
- Winter.**  
 Mean and extreme snowfalls of, in New England, 1895-1916 (C. F. Brooks) (4 figs.), 4 p., 281.  
 Of 1916-17 at Greenwich, England, 118.
- Yamaga, N., co-author.** *See* Larmor & Yamaga.
- York, N. Y.**  
 Halo phenomena April 8, 1917, (M. N. Stewart), 207.
- Young, Floyd D.**  
 Formula by, for predicting minimum temperature, discussed, 407.
- Young, R. Frank.**  
 Tornadoes of March 11, 1917, in Montgomery County, Ohio (fig.), 1 p., 117.
- Zi-ka-wei, China.**  
 Correlation of pressure with Nemuro (T. Okada), 240.  
 Correlation between the March pressure-difference Zi-ka-wei-Miyazaki and the mean of the following August temperature at Nemuro+Miyako (T. Okada), 535.



